

XXXIV. ON *AELUROPHRYNE MAMMATA*,
GTHR., AN ADDITION TO THE BATRA-
CHIAN FAUNA OF KASHMIR.

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When in the Ladakh Valley, Kashmir, in August 1917, my son Captain C. L. Boulenger found, at an altitude of 12,000 feet, under a stone, a single young toad, measuring 25 mm. from snout to vent and still bearing a stumpy vestige of the tail. This toad was at first a puzzle to me. Its vertical pupil, combined with the absence of teeth, suggested the curious forms, annectant to the Bufonidae and the Pelobatidae, which I have described under the names of *Cophophryne*¹ and *Ophryophryne*.² I am now convinced that it is the young of the toad described by Günther³ as *Bufo mammatus*, from the Kham Mountains in the Chinese province of Sze Chuen.

Günther's specimens were, as he admitted, in a poor state of preservation, and the shape of the pupil could not have been recognized. But an examination of the vertebral column and of the pectoral arch, which I have been able to make on one of the type specimens in the British Museum, shows the sacral vertebra to have unusually strongly dilated transverse processes and to articulate with the coccyx by a single condyle, as in *Pelobates* and *Megalophrys*, with both of which it agrees also in the structure of the pectoral arch (precoracoid strongly curved, sternum with a long bony style), thus confirming my first impression as to the affinities of the Kashmir specimen. *Bufo mammatus*, for which I now propose the generic name *Aclurophryne*, in allusion to the cat-like pupil, is closely allied to *Cophophryne*, differing from it in the absence of a notch in the posterior border of the tongue, which is oval in shape; the tympanum is present, though hidden under the skin, and the eustachian tube moderately large.

We are therefore now acquainted with three closely related generic types filling the gap between the Pelobatidae and the Bufonidae, and it may appear a moot point as to which of the two families they should be referred. As I am more and more losing faith in the importance of the presence or absence of teeth as a family character,⁴ I would suggest an alteration of the definition of

¹ *Ann. and Mag. N. H.* (5) XX, 1887, p. 406.

² *Op. cit.* (7) XI, 1903, p. 186.

³ *Ann. Mus. Zool. St. Pétersb.*, 1896, p. 10.

⁴ *Cf. Boulenger, Ann. and Mag. N. H.* (6) I, 1888, p. 188.

the Pelobatidae so as to include these toothless forms. Although the definition will then be very vague indeed, the group will at least be expressive of the natural affinities of its constituents, which may be described as lowly forms approaching the Discoglossidae and leading on the one hand to the Cystignathidae (through *Batrachopsis*, Blgr.), on the other to the Bufonidae.

ADDENDA.

Since this note was written, Dr. Annandale has submitted to me two specimens of a toad from high altitudes in Kashmir, sent to him quite recently by Mr. F. J. M. Mitchell, as representing the adult of the tadpole described by him in these *Records*, XIII, 1917, p. 417, figs. 1, 2, as that of *Rana pleskei*, Gthr. I have no doubt Mr. Mitchell's suggestion is correct, and as the toads belong to *Aelurophryne mammata*, the resemblance of the tadpole to that of *Pelobates*, with which I had been struck on reading Dr. Annandale's description, is accounted for, and affords a confirmation of the systematic position assigned to *Aelurophryne*.

[I have to thank Mr. F. J. Mitchell for sending me further specimens of the tadpole which I recently described as that of *Rana pleskii*, and also of the adult which he believed, on my identification of the larva, to belong to that species. It was quite clear from the most superficial examination of the adult that it was not *Rana pleskii*. Almost at the same time as I received these specimens from Kashmir I also received from Dr. Boulenger the manuscript of his paper on *Aelurophryne*. This coincidence led me to re-examine all the material in the Indian Museum referred to *Rana pleskii*, which includes specimens from Tibet named by Dr. Boulenger as well as those collected in that country by Capt. F. H. Stewart (*Rec. Ind. Mus.* II, p. 345) and the tadpoles from Kashmir described by me in *Rec. Ind. Mus.* XIII, p. 417.

The eye was concealed in most of the specimens, but I found that on dissecting off the lower eye-lid of some very young examples which had just lost their tails, the pupil appeared to be slightly vertical though it was contracted to so small a speck that its shape was hard to see, while in other young specimens it was certainly not vertical. I still had very great difficulty in distinguishing the two forms on any other external character, as the examples of neither were in good condition, but Mr. Mitchell's series of beautifully preserved tadpoles and young of the species common at high altitudes in Kashmir, leaves no possible doubt that I had confused the young of *Rana pleskii* with those of *Aelurophryne*, and that the tadpole which I ascribed to the former really belongs to the latter. *N. Annandale.*]
